What Is Claimed Is:

1. A method of allocating computer resources in a virtual machine system, comprising the steps of:

providing an active VM and a standby VM;

allocating a main storage area sufficient to execute a certain application program to the active VM and a small main storage area insufficient to execute the application program to the standby VM; and

when a fault occurs in the active VM, attaching a part or all of the main storage area allocated to the active VM to the standby VM.

2. The method of allocating computer resources in the virtual machine system according to claim 1, further comprising the steps of:

providing a hot standby application program performing the same application as the certain application program in an auxiliary memory; and

when a fault occurs in the active VM, attaching a main storage area allocated to the certain program to the standby VM, and executing the hot standby application program using the main storage allocated to the OS of the standby VM.

3. The method of allocating computer resources in the virtual machine system according to claim 1,

wherein the virtual machine system has a virtual machine monitor to control plural OSs, which provides a resource

management table which contains the respective use amounts of main storage for each of OSs, the virtual machine monitor, application programs, and unused areas; OSs or virtual machine monitor that uses the areas; and OSs or virtual machine monitor as target systems to change in abnormal status; and

wherein the virtual machine monitor, when a fault occurs in the active VM, refers to the resource management table and issues a request to attach the use amount of a required main storage area to a recorded target system to change in abnormal status.

4. A method of allocating computer resources in a virtual machine system, comprising the steps of:

providing an active OS and a standby OS; and

recording uses of main storage allocated to the active OS;

when a fault occurs in an application program operating on the active OS, referring to the recorded uses and reallocating main storage used by the failing application program to the standby OS, thereby executing an application program performing the same application as the application program that failed in the active OS.

5. A method of allocating computer resources in a virtual machine system having a virtual machine monitor controlling plural OSs,

wherein an active OS calculates computer resources

used for execution of one or more application programs, including an application program of a hot standby job in which a program performing a same application is executed under the standby OS when a fault occurs, and if resources are sufficient, notifies the virtual machine monitor of which application program is using which resource; if resources are insufficient, obtains a new resource from the virtual machine monitor; and

wherein, when a fault occurs in an application program of the active OS or the hot standby job, the virtual machine monitor issues to the standby OS a request to attach a resource having being used by the application program of at least the hot standby job to the standby OS.

6. A method of allocating computer resources in a virtual machine system, for exclusively executing plural programs performing same applications by using a single computer system which has plural OSs, a virtual machine monitor controlling the plural OSs, and resources including main storage,

wherein a first OS of the plural OSs reports a resource allocated to a first application program operating on the first OS to the virtual machine monitor, and upon detecting a fault of the first application program, reports the fact to the virtual machine monitor;

wherein, upon receipt of a fault detection report from the first OS, the virtual machine monitor disconnects the

resource having been used by the first application program from the first OS, allocates the resource to a second OS, and requests the second OS to initiate a second application program performing the same application as the first application program; and

wherein the second OS allocates a resource used by the second application program when initiated, from the allocated resource.

7. A method of allocating computer resources in a virtual machine system, for exclusively executing plural programs performing same applications by using a single computer system which has plural OSs, a virtual machine monitor controlling the plural OSs, and resources including main storage,

wherein a first OS of the plural OSs reports a resource allocated to a first application program operating on the first OS to the virtual machine monitor;

wherein, upon detecting a fault of the first OS, the virtual machine monitor allocates a part or all of resources having been used by the first OS to a second OS and requests the second OS to initiate a second application program performing the same application as the first application program; and

wherein the second OS allocates a resource used by the second application program when initiated, from the allocated

resource.

8. A method of allocating computer resources in the virtual machine system according to claim 6, wherein, where the first OS and the second OS are in standby configuration, when a fault is detected in an application program operating on the first OS, a second application program is run on the second OS only when the failing application program is a hot standby job.

9. A virtual machine system which comprises an active OS, a standby OS, and a virtual machine monitor controlling plural OSs,

wherein the active OS includes at least: a fault level notification routine that monitors fault levels of application programs executed under the active OS, and when a fault is unrecoverable, reports the fact to the virtual machine monitor; and a resource disconnection routine that, upon receipt of a request to disconnect a resource allocated to the active OS from the virtual machine monitor, disconnects the requested resource;

wherein the standby OS includes a resource engaging routine that, upon receipt of a request to newly attach a resource from the virtual machine monitor, attaches the requested resource to that OS; and

wherein the virtual machine monitor includes: an OS fault detecting routine that detects a fault of the active OS; a means that, upon detecting a fault of the active OS, finds

a resource to be reallocated to the standby OS and reports a resource to be newly attached to the standby OS; a means that, upon receipt, from the active OS, of notification that an application program is faulty, finds a resource to be disconnected and reports it to the active OS; and a means that, after completion of disconnecting the resource, reports a resource to be newly attached to the standby OS.